

EXHIBIT A



- ☐ structure search
- ☐ goldify

Indexes

- ☐ alphabetical
- ☐ chemistry
- ☐ math/physics
- ☐ general
- ☐ source documents

IUPAC > Gold Book > alphabetical index > G > **gel fraction**

PREVIOUS

[gel aging](#)**gel fraction**

Mass fraction of the network material resulting from a network-forming polymerization or crosslinking process.

Note:

The gel fraction comprises a single molecule spanning the entire volume of the material sample.

Source:

PAC, 2007, 79, 1801 (*Definitions of terms relating to the structure and processing of sols, gels, networks, and inorganic-org*

Interactive Link Maps		
First Level	Second Level	Third Level

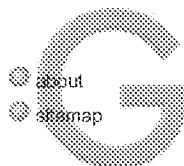
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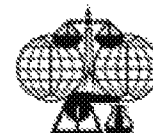
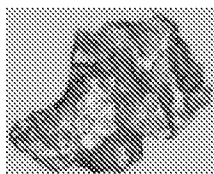
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- ☐ about
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EXHIBIT B



☐ structure search

☐ goldify

Indexes

☐ alphabetical

☐ chemistry

☐ math/physics

☐ general

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IUPAC > Gold Book > alphabetical index > S > **sol fraction**

PREVIOUS

sol

NEXT

sol-gel coating

sol fraction

Mass fraction of the dissolved or dispersed material, resulting from a network-forming polymerization or crosslinking process, that is constituted of molecules of finite (statistically definable) relative molecular masses.

Source:

PAC, 2007, 79, 1801 (*Definitions of terms relating to the structure and processing of sols, gels, networks, and inorganic-organic hybrid materials (IUPAC Recommendations 2007)*) on page 1806

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First Level	Second Level	Third Level

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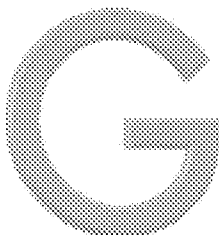
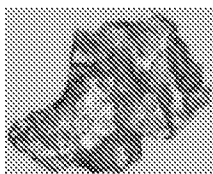


EXHIBIT C



IUPAC > Gold Book > alphabetical index > P > **pre-gel state**

PREVIOUS
pre-gel regime

NEXT
pre-polymer

- ☐ structure search
- ☐ goldify

Indexes

- ☐ alphabetical
- ☐ chemistry
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pre-gel state

State of a network-forming polymerization or crosslinking process in the pre-gel regime.

Note:

In the pre-gel state, the sol fraction is equal to unity. All the molecules formed have finite (statistically definable) relative molecular masses.

Source:

PAC, 2007, 79, 1801 (*Definitions of terms relating to the structure and processing of sols, gels, networks, and inorganic-organic hybrid materials (IUPAC Recommendations 2007)*) on page 1805

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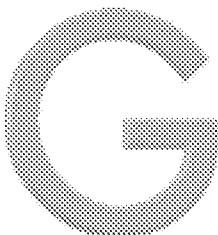
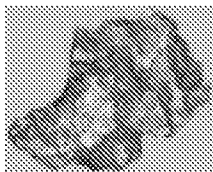


EXHIBIT D



☐ structure search

☐ goldify

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☐ source documents

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IUPAC > Gold Book > alphabetical index > P > **pre-gel regime**

PREVIOUS

pre-filter effect in luminescence spectroscopy

NEXT

pre-gel state

pre-gel regime

Stage of a network-forming polymerization or crosslinking process extending up to, but not beyond, the gel point.

Note:

The pre-gel regime may be expressed as the length of time or the chemical conversion required to reach the gel point from the start of a polymerization or crosslinking process.

Source:

PAC, 2007, 79, 1801 (*Definitions of terms relating to the structure and processing of sols, gels, networks, and inorganic-organic hybrid materials (IUPAC Recommendations 2007)*) on page 1805

Interactive Link Maps		
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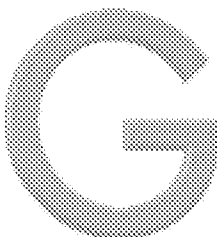
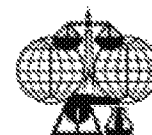
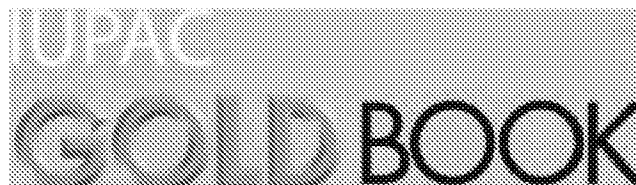
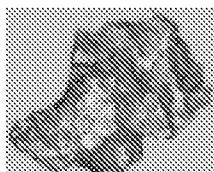


EXHIBIT E



IUPAC > Gold Book > alphabetical index > G > **gel point**

PREVIOUS

gel permeation chromatography

NEXT

gel time

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gel point

gelation point

Point of incipient network formation in a process forming a chemical or physical polymer network.

Notes:

1. In both network-forming polymerization and the crosslinking of polymer chains, the gel point is expressed as an extent of chemical reaction (*c.f.*, gel time).


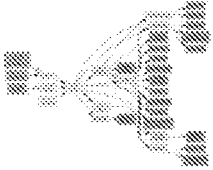
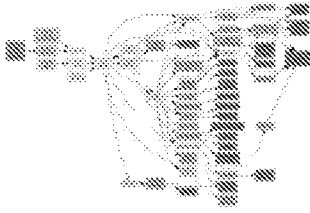
2. At the gel point a solid (network) material spanning the entire system is formed.

See also: gel fraction

3. The gel point is often detected using rheological methods. Different methods can give different gel points because viscosity is tending to infinity at the gel point and a unique value cannot be measured directly.

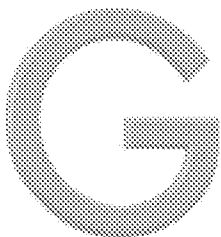
Source:

PAC, 2007, 79, 1801 (*Definitions of terms relating to the structure and processing of sols, gels, networks, and inorganic-organic hybrid materials (IUPAC Recommendations 2007)*) on page 1809

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